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DEVELOPMENT IN RUMANIA'S ELECTRIFICATION PROGRAM
AND ELECTRICAL INDUSTRY

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A. Electrification

At the end of 1950, Rumania had 603 electric power stations with a total installed power capacity of 740,000 kilowatts. Only 600,000 kilowatts of that capacity could be used. This power was utilized by 630 enterprises, with an average of 1,230 kilowatts [sic] per enterprise. Under these conditions the use of electric power by factories was completely uneconomical.

Hence, an electrification plan was drawn up with the following principal objectives: (1) To supply existing and newly constructed factories with all the needed electrical energy. (2) To use lower grades of fuel, such as lignite, coal remnants, and peat, leaving the higher grade of fuel for use in the chemical and transportation industries, or for heating purposes. (3) To use water power for irrigating dry regions, establishing navigable waterways, preventing floods, and recovering lands. (4) To electrify the railroads and public transportation systems of cities. (5) To electrify villages in order to raise the technical level of agriculture and increase labor productivity. (6) To increase the use of electricity in homes, dispensaries, and cultural centers, and to build movie houses and radiofication centers in villages. (7) To build new power stations in regions which had been long neglected in the past.

The electrification program for the period 1950-1960 aims to create new electric power stations as well as to expand existing ones. By 1955, Rumania is expected to have a total installed power capacity of 1.7 million kilowatts; and by 1960, Rumania's annual production of electric energy will be five times higher. [than in 1953] This will mean that in 1960, industries and mines will have four times as much electrical energy at their disposal as in 1950.

In 1950, approximately 92 percent of the power was derived from steam, which in turn was obtained from expensive fuels, and only 8 percent of the total was hydroelectric power. In 1960, the amount of power obtained from hydroelectric stations will be much increased, and steam power will use lower grades of fuel. New steam-driven electric plants, some having a capacity of 100,000-150,000 kilowatts, will be built to supply a new series of chemical plants with the needed quantities of electrical energy. steam, and hot water.

In the 3 years following the issuance of the electrification plan, Rumania achieved important successes in electrification and in the electrical industry. In his 23 August 1953 speech, Gheorghiu-Dej states that by the end of 1953 the installed power capacity of steam electric and hydroelectric power stations will grow by 350,000 kilowatts and will reach a total of 1,050,000 kilowatts. By 1955, this amount will grow to 1,330,000 kilowatts, as compared to the 600,000 kilowatts of past years.

The Gheorghe Gheorghiu-Dej steam electric power plant in Doicești, completed on 3 August 1952, was working at only 70 percent of capacity by the end of 1953. This station is supplying the industrial enterprises of the Bucharest, Ploesti, and Stalin regions with increased amounts of electrical energy and is expected to contribute to the electrification of drilling and extraction operations in the petroleum industry.

The Ovidiu II steam electric power plant, opened on 17 August 1952, is operating at full capacity and is supplying needed energy for Dobrujan factories, for irrigation and other agricultural projects, and for the cultural and economic projects aimed at developing this region.

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The V. I. Lenin hydroelectric power plant, now under construction in Bicaz, will produce 430 million kilowatt-hours per year. The Moreni hydroelectric power plant started operating in 1953 and now supplies much of the needed energy for Rumania's existing and newly built industries. A new hydroelectric power plant is expected to start operation in the Hungarian Autonomous Regiune in the near future. The plant will be located in a region which is rich in natural gases.

Achievements in rural electrification have been equally rewarding. According to 1941 statistics, only 6 percent of Rumania's rural population benefited from electrical energy. As late as the time when the electrification plan was being set up, only 450 of the country's 13,000 villages were electrified. To fulfill the electrification plan, half of the villages will be electrified by present high voltage lines and the other half by small local electric power stations which will be built. Complete electrification of villages can only be accomplished simultaneously with the socialist transformation of agriculture. Electrification of difficult agricultural work can be introduced only on state farms, in MTS, and in agricultural collectives. The working peasant cannot use electrical energy for his individual production but is limited to using electricity solely in his home.

B. Electrical Equipment Industry

A strong electrical equipment industry must be created if the country's electrification program is to succeed. In 1945, there were only seven large electrical equipment shops, and these were engaged only in repair work. Factories constructed since 1945 include Electroputere, Clement Gottwald, Electromotor, Electroaparataj, Electroizolantul, and many others which produce electrical machinery, high- and low-voltage equipment, insulation materials, etc.

The volume of electrical equipment production was 11.8 times greater in 1952, and 13 times greater in 1953, than in 1948. The variety of electrical goods and equipment rose considerably in the past several years. Since 1951, over 250 new items have been put in production. Most products manufactured during 1952 and 1953 were made according to Soviet methods and instructions. Industrial equipment produced for the first time included electrical equipment for the petroleum industry, 1,000-kilowatt motors for wood grinders in paper mills, nonsparking electric motors for prevention of gas explosions, transformers for electric welding, small electric power plants (3-300 kilowatts), small alternating current electric generators for tractors, instrument transformers for ammeters and voltmeters, electric meters, etc.

Factories specialized in various types of electrical equipment, as follows:

Electroputere: large electrical equipment such as electric motors, high-powered transformers, and high-voltage equipment.

Electroaparataj: electric fixtures and low-voltage automatic switches.

Electromagnetica: instrument transformers.

Electroizolantul: high- and low-voltage insulators.

Both party and government have been laying great stress on the electrical equipment industry of the country. Consequently, production of the electrotechnical industry in 1949 was 240 percent, in 1950 was 420 percent, and in 1951 was 725 percent of 1948 production. Production in 1952 was about four times that of 1949. The following table shows the annual production of selected items, using 1949 as the index year:

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	<u>1949</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>
Electric motors	100	302	750	1,198
Transformers	100	170	300	687
Electric generators	100	953	1,570	9,665
Electric cable	100	160	183	255
Low-voltage automatic switches	100	227	502	1,353

The following important products are now being manufactured for the first time: electric traction motors, 2,000-kilowatt electric motors for use in heavy industry, high-voltage transformers for electrification purposes, alternating current generators, phase regulators, high-voltage equipment of up to 110 kilowatts, compressed air actuated interrupters, lightning rods, explosionproof transformers, electric locomotives for use in factories, and battery-powered mine locomotives.

In conformity with the decision to increase consumer goods, announced at the 19-20 August 1953 meeting of the Central Committee of the PMR (Particul Man-torese Roman, Rumanian Workers Party), a considerable amount of electrical household equipment, such as electric fans, electric refrigerators, etc., has been produced. At the end of the Five-Year Plan, the total production of electrotechnical goods will be 3.8 times higher than in 1950. Production of electric motors will be 5.2 times greater, electric generators 14.5 times greater, transformers 3.6 times greater, and cables and electric cords 2.2 times greater than in 1950. As a result of the application of Soviet methods of labor, and the increase in the number of Stakhanovites and leading workers, labor productivity in this industry reached the level planned for 1955 as early as 1952.

The electrification program of the country requires an increase in the number of trained cadres. For that reason, the Ministry of Electrical Energy and Electrical Equipment Industry established eight intermediate technical schools and one institute of higher learning. These schools train technicians for 14 different specialties in the fields of electrical energy, electrical equipment industry, and hydroelectric constructions. The schools have a 4-year curriculum. Seven semesters are devoted to study and one semester to a practical project. Admission to these schools is on the basis of an examination, after completion of 7 years of elementary school. Schools in Stalin, Cluj, and Timisoara offer courses both in Rumanian and in the languages of the national minorities living in those areas. Both evening and correspondence courses are available to workers.

Much of the progress in Rumania's electrical industry is made possible only by the constant aid received from the USSR. Construction plans, machinery, and tools of all types arriving from that country and Soviet methods of labor adopted throughout the industry have proved an invaluable aid to production and to the development of the electrical industry.

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